**Pacing Guide for Middle Grades Math 8th**

**Halifax County Schools**

**2016 - 2017**

Grade 8

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| **Unit Title: THE NUMBER SYSTEM** | | | | | |
| **Big Ideas:**  1. Know that there are numbers that are not rational, and approximate them by rational numbers.  2. Work with radicals and integer exponents. | | | | | |
| ***Unit*** | ***Dates*** | ***Days*** | ***Assessment*** | ***Topics*** | ***Standards*** |
| Unit 1  2-7% | August 29 - September 16, 2016 | 14 | **District Pre-Test:** Week of Aug. 29-Aug. 31, 2016  **Teacher-Generated Assessment Dates are Bi-weekly.** | * Rational Numbers * Irrational Numbers * Compare/Order Rational Numbers * Compare/Order Irrational Numbers * Decimal expansion * Approximation of irrational number and show on a number line diagram | 8.NS.1  8.NS.2 |

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| **Unit Title: EXPRESSIONS AND EQUATIONS** | | | | | |
| **Big Ideas:**   1. Understand the connections between proportional relationships, lines, and linear equations. 2. Analyze and solve linear equations and pairs of simultaneous linear equations. | | | | | |
| Unit 2  27-32% | September 19–November 18, 2016 | 44 | **Common Formative Assessment I:** Week of Oct. 5 – 7, 2016  **Teacher-Generated Assessment Dates are Bi-weekly.** | * Integer exponents * Square roots, cube roots * Scientific notation * Large/small numbers expressions (power of 10) * Linear equation with one variable (infinitely many solutions, one solution, no solution) * Slope (rate of change) * Y-intercepts * Direct proportions * Systems of linear equations (algebraically & graphically) | 8.EE.1  8.EE.2  8.EE.3  8.EE.4  8.EE.5  8.EE.6  8.EE.7a  8.EE.7b  8.EE.8a  8.EE.8b  8.EE.8c |

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| **Unit Title: FUNCTIONS** | | | | | |
| **Big Ideas:**   1. Define, evaluate, and compare functions. 2. Use functions to model relationships between quantities. | | | | | |
| Unit 3  22-27% | November 21, 2016 – February 3, 2017 | 41 | **Common Formative Assessment II:**  Week of Dec. 7-  Dec. 9, 2016  **Teacher-Generated Assessment Dates are Bi-weekly.** | * Understanding functions (order pairs, etc.) * Linear functions * Properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions * Interpret the equation y = mx + b * Construct functions * Functional relationship between two quantities | 8.F.1  8.F.2  8.F.3  8.F.4  8.F.5 |

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| **Unit Title: GEOMETRY** | | | | | |
| **Big Idea:**  Understand congruence and similarity using physical models, transparencies, or geometry software. | | | | | |
| Unit 4  20-25% | February 6 – March 31, 2017 | 38 | **Common Formative Assessment III:** Week of Feb 20 - 24, 2017  **Teacher-Generated Assessment Dates are Bi-weekly.** | * Properties of Transformations * Congruence * Similar Triangles * Angle Relationships * Effect of dilations, translations, rotations, and reflections on two-dimensional figures * Interior and Exterior angles of triangles * Parallel lines & transversals * Distance in the coordinate plane * Pythagorean Theorem * Volume of cylinders, cones, spheres | 8.G.1a  8.G.1b  8.G.1c  8.G.2  8.G.3  8.G.4  8.G.5  8.G.6 |

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| **UNIT TITLE: STATISTICS AND PROBABILITY** | | | | | |
| **Big Ideas:**   1. Understand and apply the Pythagorean Theorem and volume. 2. Solve real-world mathematical problems involving volume of cylinders, cones, and spheres. | | | | | |
| Unit 5  15-20% | April 3 – May 12, 2017 | 24 | **Common Formative Assessment IV (Post Test):** Week of May 15 – 19, 2017  **Teacher-Generated Assessment Dates are Bi-weekly** | * Scatter Plots/ trend lines * Interpret linear models * Patterns in data/categorical data in frequency tables | 8.SP.1  8.SP.2  8.SP.3  8.SP.4 |

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| **UNIT TITLE: COUNTDOWN TO THE EOG** | | | | | | |
| Unit 6 | May 15 – June 9, 2017 | 19 | **Teacher-Generated Assessment Dates are Bi-weekly** | EOG REVIEW   * Formulas * Vocabulary * Symbols * Test-Taking Strategies * Number System * Functions * Algebra * Geometry * Statistics | 8.EE.1  8.EE.2  8.EE.3  8.EE.4  8.EE.5  8.EE.6  8.EE.7a  8.EE.7b  8.EE.8a  8.EE.8b  8.EE.8c | 8.F.1  8.F.2  8.F.3  8.F.4  8.F.5  8.G.1a  8.G.1b  8.G.1c  8.G.2  8.G.3  8.G.4  8.G.5  8.G.6 |